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(71) Applicant: FUJITSU LTD

(72) Inventor: KURAHASHI TOSHIO

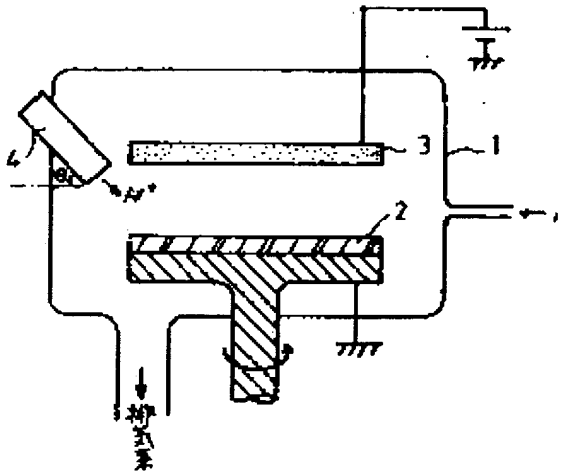
(74) Representative:

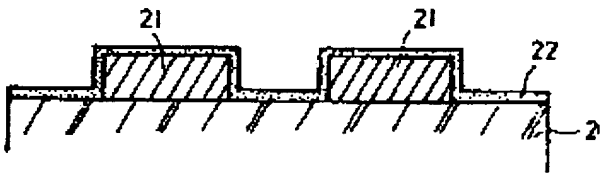
(54) FORMATION OF THIN FILM

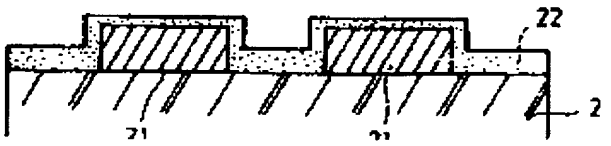
(57) Abstract:

PURPOSE: To flatten and smooth the surface of a deposited film in a stabilized manner by a method wherein a rotating sample and either of a deposition film material or an ion gun are arranged facing each other, the other party is arranged facing the surface of the sample from the side face of either of them, and simultaneously with the deposition of a thin film, a thin film is coated while it is coated on the surface of the raised part of the sample is being removed by an ion.

CONSTITUTION: A PSG substrate target 3 is arranged facing the front surface of the sample substrate 2 which rotates at several hundreds revolution per minute in a reaction chamber 1 is arranged facing the front surface of the sample substrate 2, an ion gun 4 is arranged facing the surface of the sample substrate on the lateral side of the target 3, and the ion gun 4 is maintained at the angle of 45W70° to the sample substrate surface. The







to the sample substrate surface. The sample substrate 2 consists of an aluminum wiring layer 21 provided on a silicon substrate 20, and when a PSG film 22 is coated on said PSG film 22 is thinly coated by and by on a wiring layer 21 by the repetition of coating by sputtering and the etching using the ion gun, and also the PSG film 22 is thickly coated on the substrate 20 located at the recessed part. This is because an etching is performed intensively on the raised part by the ion gun, the wiring layer 21 is buried and the PSG film having flat surface can be obtained.

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Country: JP Japan

Kind:

Inventor(s): KURAHASHI TOSHIO

Applicant(s): FUJITSU LTD
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IPC Class: H01L 21/31; H01L 21/203;

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Other Abstract Info: none

Foreign References: (No patents reference this one)